

Site Visit Report

Under the *European Union (Drinking Water) Regulations 2023*, the Environmental Protection Agency (EPA) is the supervisory authority in relation to Uisce Éireann and its role in the provision of public drinking water supplies. This audit was carried out to assess the performance of Uisce Éireann in providing clean and wholesome water to the public water supply named below.

The audit process is a sample of the performance of a water treatment plant and public water supply on a given date.

Water Supply Zone	
Name of Installation	Mullenbawn
Organisation	Uisce Éireann
Scheme Code	2900PUB0149
County	Tipperary
Site Visit Reference No.	SV34990

Report Detail	
Issue Date	05/03/2026
Prepared By	Michelle Roche

Site Visit Detail			
Date Of Inspection	09/02/2026	Announced	Yes
Time In	10:30	Time Out	11:55
EPA Inspector(s)	Michelle Roche		
Additional Visitors			
Company Personnel	Uisce Éireann: Pat Duggan, Denis McGrath, Noel Walsh, Eamon O'Gorman and Pierce Faherty Tipperary County Council (working on behalf of Uisce Éireann): Phillip Bradshaw		

> Summary of Key Findings

1. Alarm and inhibit settings were not programmed correctly on the PLC at the water treatment plant to allow appropriate alarm dial-out and automatic plant shutdown on low chlorine residuals.
2. There is currently no method in place for determining whether the water treatment plant is operating when viewing data remotely. The operator has been relying on accessing UV data to infer that if the UV is operating then the plant is operating.
3. There was no documented alarm response procedure in place at the water treatment plant and site specific contact details for escalating incidents were not displayed.

Uisce Éireann should submit a report to the EPA on or before 05/04/2026 detailing the actions taken and planned, with timescales, to close out the seven recommendations in this audit report.

> Introduction

The Mullenbawn Public Water Supply serves a population of 1,783 and produces on average 974 m³ of treated water per day, from a spring source. Treatment consists of two pressure filters, UV treatment as primary disinfection and chlorination as secondary disinfection.

The audit was undertaken in response to a boil water notice that was issued on the Mullenbawn supply on 01/02/2026 affecting the full population of 1,783.

> Supply Zones Areas Inspected

The audit consisted of interviews with Uisce Éireann and Tipperary County Council operational staff, a review of water quality trends and a walk through of the Mullenbawn Water Treatment Plant.



1.1

Was the incident suitably alerted to the plant operators, escalated and managed in order to maintain water quality and protect public health?

Answer

No

Comment

1. A low chlorine alarm triggered on 01/02/2026 did not dial out to the operator as intended and therefore was not suitably responded to as a water quality incident. The subsequent automatic plant shutdown also did not work as intended to protect public health.

2. Uisce Éireann investigations into the incident determined that the low chlorine alarm was incorrectly programmed in the PLC. The alarm was appearing as an instrument fault with the chlorine residual monitor and therefore not dialling out to operators as a low chlorine alarm or instigating a plant shutdown.

3. The fault was re-programmed on 09/02/2026. A review of water treatment plants in County Tipperary identified four other sites as having the same issue and these have also been re-programmed. A national review of sites upgraded under the Uisce Éireann disinfection programme by the specific contractor involved has been initiated.

4. The plant operator did receive the instrument fault alarm on his phone at 3:20am on 01/02/2026 but did not visit the site at this time. A contributing factor to the operator's decision not to visit the site straight away was that the plant appeared not to be operating at the time.

5. An unsatisfactory system is currently in place whereby there is no remote access to water treatment plant flow data for operators to determine if the plant is operating or not. The operator has been using UV trend data as a proxy for flow data to let him know if that plant is operating.

6. At the time of the low chlorine incident remotely accessible UV trend data was showing UV units were not operating and so the operator inferred that the water treatment plant was not operating. It was later discovered that the UV treatment was operating and there was an error in the trend data being transmitted remotely to the operator's phone.

Recommendation

1. Ensure that water treatment plant flow data is available remotely to plant operators.

2. Review all aspects of alarm and inhibit triggers and dial-outs, and water quality trend data to ensure appropriate oversight and remote access to the water treatment plant is in place at all times.



2. Disinfection

2.1

Is the chlorine dosed appropriately?

Answer

No

Comment

1. Chlorine dosing pumps do not automatically switchover between the duty and standby pump on pump failure. Pumps need to be manually switched over.

Recommendation

3. Install an automatic switchover on chlorine dosing pumps in the event of pump failure.



3. Management and Control

3.1

Is there a documented alarm response procedure?

Answer

No

Comment

1. There is no documented procedure for responding to water treatment plant alarms. An incident escalation chart is displayed at the water treatment plant but no site specific contact details are displayed.
2. There are no standard operating procedures available for critical water quality treatment processes or for manual plant shutdown or restart.

Recommendation

4. Ensure that there is a documented procedure in place for responding to and escalating all alarms generated at the water treatment plant. The procedure should clearly document the corrective actions and set out delegation of responsibilities.
5. Ensure standard operating procedures are in place for critical water quality treatment processes, including manual shutdown and start up of the water treatment plant.
6. Ensure that all staff are trained and aware of alarm response procedures and standard operating procedures.

3.2

Are suitable alarm settings in place to alert operators to deteriorating water quality and/or the failure of a critical treatment process?

Answer

No

Comment

1. A disinfection contact time alarm is in place to alert plant operators to inadequate disinfection at the treatment plant. This alarm does not need to be in place. Contact time is not applicable at this site as chlorination provides secondary disinfection only.

Recommendation

7. Remove unnecessary alarms and dial-outs to ensure plant operators receive and give appropriate attention to critical water treatment alarms.

Recommendations

Actions required by Uisce Éireann

During the audit, Uisce Éireann representatives were advised of the audit findings and that action must be taken by Uisce Éireann to address the issues raised.

Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the recommendations raised in this report without delay.

Response to Audit Report

Uisce Éireann should submit a report to the EPA on or before the date specified in the Summary of Key Findings detailing the actions taken and planned, with timescales, to close out the recommendations in this audit report.

The EPA advises that the findings and recommendations from this report should, where relevant, be addressed at other public water supplies.

Publication of Reports

Audit reports are published to the EPA's website, www.epa.ie, typically 1 month after the audit report is issued to Uisce Éireann.